TLACOATZINTEPEC CHINANTEC SYLLABLE STRUCTURE.

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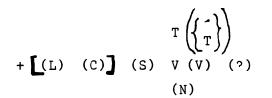3. The prosody

0. INTRODUCTION.

This paper describes the syllable structure of Tlacoatzintepec Chinantec.[1] The syllable structure of three surrounding Chinantec dialects have been described earlier in IJAL: Usila (Skinner 1962), Tepetotutla (Westley 1971) and Sochiapan (Foris 1973). This paper may therefore be of interest for comparative study.[2]

The approach adopted in this study is that which sees the phonology in a hierarchy of ranks, having smaller units distributed into larger units which are distributed into still larger units. The syllable is defined as the rank whose units have a structure in terms of phonemes and which functions in the rhythm group. The rhythm group consists of one to three syllables; only the last is stressed. The bulk of the language corpus consists of rhythm groups with only one syllable.[3] The focus of this study is therefore on the more complex stressed syllable.

The core of the stressed syllable includes a consonantal margin, a vocalic nucleus and a tonal prosody.

A minimal syllable includes a consonant (C) or a laryngeal (L), one vowel (V) and one tone (T). The maximum expansion of the syllable includes a cluster of a laryngeal, a consonant and a semivowel (S); a vowel cluster, a glottal closure (ʔ), nasalization (N) and two tones or one tone and ballistic stress (ˆ). The co-occurrence restrictions of the elements in the syllable margin are described elsewhere in this paper.

The structure of the syllable can be diagrammed as follows:

$$+\left[\text{(L)} \quad \text{(C)}\right] \text{ (S) } \text{V (V) } \text{T}\left(\left\{\begin{matrix}\text{ˆ}\\\text{T}\end{matrix}\right\}\right) \text{ (ʔ)}$$
$$\text{(N)}$$

1. THE SYLLABLE MARGIN.

The core of the stressed syllable margin may consist of one of 17 consonants.

The consonants are bilabial /p, b, m, f/ (/f/ and /b/ are only found in Spanish loanwords), interdental /θ, đ/, alveolar /n, l, r, s, t, ts/, velar /k, g, ŋ/ and laryngeal /h, ʔ/.

The consonants /p, t, k/ are voiceless stops, /b, g/ voiced stops, /m, n, ŋ/

nasals, /f, θ, s/ voiceless fricatives, /đ/ voiced fricative, /ts/ voiceless affricate and /l/ a lateral. The consonant /r/ is a retroflexed alveopalatal grooved affricate in a stressed syllable; in unstressed syllables it is an alveolar flap.[4] The fricative /h/ is phonetically the voiceless counterpart of the vowel or consonant it precedes.

eg.: p   /pa²/   "fat"

      b   /be⁴/   "Roberto"

      m   /mã³⁴/   "food"

      f   /mĩ³fe³/   "Ofelia"

      θ   /θɨ³/   "bottle"

      đ   /đãũ³/   "baby"

      n   /nĩ³/   "house"

      l   /li¹/   "flower"

      r   /re³/   [dže³]   "good"
          /rɨ³ŋĩ³/   [řɨ³ŋĩ³]   "chayote"

      s   /sai⁴²/   "yucca"

      t   /tou³/   "banana"

      ts /tsaɨ³/   "dog"

      k   /ka²hwɨ¹/   "cow"

      g   /gõ²/   "two (animate)"

      ŋ   /ŋãɨ⁴/   "consult"

      h   /hĩʔ⁴/   "orange"

      ʔ   /ʔu⁴/   "mirror"

The core of the margin may be expanded by the addition of a semivowel or by the fricative /h/. Three types of consonant clusters result:

    a.   The consonants /t, ts, θ, l, s, n, ŋ, k, g, h/ may be palatalized through the addition of the semivowel /y/.[5]

    When the alveolar consonants occur with /y/, their point of articulation is changed to palatal. This is a specific feature of this dialect and excludes the interpretation of /y/ as the vowel /i/, as has been done by both David Foris and Leo Skinner. (The symbol c^y is used to mark this change of articulation.) However, when associated with velar and interdental consonants, the semivowel is clearly a separate segment, though less syllabic than the vowel of the following nucleus.

eg.: /tʸõ²/   "it is"   /θyã̃ʔ²/   "we catch"
      /lʸã²/   "we buy"   /kyã²/   "ten"
      /sʸãʔ³/   "different"   /gyu³/   "sun"
                                         /hyã²/   "he comes"
      /nʸõ⁴²/   "as well, also"   /ŋyõ⁴²/ [ñɔ̃⁴²] "friend"

/tsʸíʔ¹/   [čǐʔ¹]   "small (inanimate)"

     b. The consonants /p, ŋ, g, k, h/ may be labialized through the addition of the semivowel /w/. Preceding the vowel /u/ the semivowel /w/ is actualized as simultaneous labialization of the consonant. Preceding all other vowels the semivowel /w/ is a separate segment, but less syllabic than the vowel of the following nucleus.

eg.:   /kwâʔ¹/   "parrot"   /kwu³/   [kʷu³]   "corn"

        /gwe²/   "ground"   /pwe²/   "taco"

        /ŋwi¹/   "iron"   /hwɨ⁴/   "path"

     c. The third type of consonant cluster consists of /h/ plus semivowels /y/ or /w/ or any nasal or lateral (including the clusters /nʸ/ and lʸ/).

eg.:   /hyâ²/   "year"

       /hweʔ⁴/   "big"

       /hmãɨ̃³/   "his father"

       /hnã̂¹²/   "I"

       /hŋyĩ̃²/   "six"

       /hnʸã̃³/   "looks like"

       /hŋĩ̃ʔ²/   "he kills"

       /hlɨʔ¹/   "wet"

       /hlʸâʔ²/   "filth"

     The consonant clusters of /ʔ/ plus a nasal or lateral, which occur in surrounding dialects, have no phonemic significance in this dialect. Occasionally these clusters can be heard from some speakers when certain syllables are pronounced in isolation. The [ʔ] in such instances fluctuates with its absence. It seems that this feature is on its way out of this dialect, appearing only as a phonetic variant with no phonological status.

2. VOCALIC NUCLEUS.

     Seven vowels occur as nuclear vowel of the stressed syllable:

        high front unrounded /i/
        high back unrounded /ɨ/
        high back rounded /u/
        mid front unrounded /e/
        mid back unrounded /e/
        mid back rounded /o/
        low central /a/

The phonetic norms of the vowels in a simple nucleus are:

/i/ [ɨ] with an allophone   [ᵊi] following /ө/

    eg.: [ʔi³] "tortilla"   [өᵊiʔ⁴] "standing"

/ɨ/ [ɨ] eg.: [ʔɨ²] "he teaches"

/u/⁶ [ᵊu] with an allophone [u] following /kʷ/

    eg.: [ʔᵊu⁴] "mirror"   [kᵊuʔ⁴] "he eats"

        [c̆ᵊu¹²] "let's go!" [kʷu³] "corn"

/e/ is always open [ɛ]   eg.: [ʔɛ̃ʔ³] "what"

/ë/ is always [ë]   eg.: [ʔë̃²] "he sings"

/o/ is always open [ɔ]   eg.: [ʔɔ̃³] "question particle"

/a/ is always [a]   eg.: [ʔa³] "where"

The core of the nucleus may be expanded by the addition of a second vowel, a vocalic nasalization, a glottal stop or any combination of these.

The following five vowel sequences occur:

    /ei/, /ai/, /aɨ/, /au/ and /ou/.

Their phonetic norms are as follows:

/ei/ is realized as [ɛi]   [mɛiʔ²] "small (animate)"
/ai/ is realized as [ai]   [tãi¹] "cat"
/aɨ/ is realized as [aʲ]   [tsaʲ³] "dog"
/au/ is realized as [au]   [hau¹] "word"
/ou/ is realized as [ɔu] after velars and bilabials and
    as [ou] elsewhere:
    [kɔu³] "one"   [өõũ] "I like"
    [ʔɔu⁴] "herb"   [tou³] "banana"
    [mõũ³] "ice"   [tsou³] "people"

All seven vowels occur nasalized in simple nuclei.

All five diphthongs also occur nasalized. Their vocalic qualities are the same as those of their counterparts with the following exceptions:[7]

The nasalized sequence /ãɨ̃/ is realized as [ãŋ] and the nasalized /ɨ/ is often realized as [ɨ̃ŋ]

    eg.: [mɨ̃ŋ³] "medicine"   [hmãŋ³] "water"

In syllables with a nasal consonant the nucleus is always nasalized. This feature occurs in the three surrounding dialects as well. Westley's interesting interpretation of /m, n, ŋ/ as the nasalized counterparts of /b, d, g/ does not fit this dialect as the phoneme /b/ is restricted to loanwords only (Westley op. cit. p. 161).

eg.:   /ʔĩʔ^1/   "shade"   /ʔɨ̃^{2}/   "I read"   /n̄ũʔ^2/   "my father"

      /ɾ̃e^{42}/   "I think" /ʔẽ^2/   "my body"   /go͂^{2}/   "two (animate)"

      /hnã^{12}/ "I"

      /ʔẽɨ̃^{4}/   "color"   /h̃ãĩʔ^{42}/ "where"   /hmãɨ̃^{3}/ "water"

      /kãũ^2/   "stone"   /kõũ^3/   "one"

    The syllable nucleus may be open or it may be closed by a glottal stop. The syllable structure does not put any restrictions as to occurrences of a final glottal. It occurs with any vowel or vowel cluster but only with the tone cluster /42/.

eg.:   /ʔɨ^3/   "tortillas"   /ʔɨʔ^1/   "ceremonial staff"

      /ʔẽĩ^3/   "who"   /ʔãuʔ^1/   "you drink"

      /mã ʔ^3/   "hill"   /mẽĩʔ^2/ "little (animate)"

      /kwâʔ^4/   "church"

      /hlɨʔ^1/   "wet"   /hmãĩʔ^{42}/ "called, name"

3. THE PROSODY.

    A syllable may be either ballistic (marked by an acute accent over the nuclear vowel) or controlled (unmarked). The primary feature which distinguishes ballistic syllables versus controlled syllables in all environments is that the ballistic syllable ends in a crescendo or an extra pulse, whereas the controlled syllable has a decrescendo or at least lack of crescendo.

    Some secondary features of the ballistic syllable are:

1) a CV́ syllable may be slightly longer than a CV syllable.
2) a CV́ʔ syllable is always shorter than a CVʔ syllable.
3) a CV̆ may have an upglide, but usually doesn't.
4) the final glottal in closed syllables is very clearly marked (fortis) on ballistic syllables, whereas they are lenis in controlled syllables.

eg.:   /hâʔ^3/   "animal"   /huʔ^1/   "nothing"

      /ñṹʔ^2/ "my father"   /hnãʔ^1/   "we"

    There are four simple tones: very high /1/, high /2/, mid /3/ and low /4/, and three tone sequences: one upglide /42/ and two downglides /12, 34/.

eg.:   /li^1/   "flower"   /nãĩ^{42}/ "I go"

      /ñ́ĩ^2/   "salt"   /hai^{12}/   "bumble bee"

      /ñũ^3/   "you"   /mã^{34}/   "food"

      /tã^4/   "bird"

The phonetic manifestation of the tones or tone sequences may vary in accordance with: (1) whether or not it occurs prepause, (2) the tone of the syllable it is preceding, (3) whether or not it precedes a voiced consonant[8] and (4) whether or not it is in a CV syllable versus a CV? syllable.

TONE 1 has a slight downglide before a very high tone. Elsewhere it is level.

TONE 1? (syllable checked by ?) is slightly higher than tone 1 and has an up-glide prepause. Elsewhere it is level.

TONE 1́ (ballistic stress) has a slight upglide prepause. It is higher and level elsewhere.

TONE 1́? (checked and ballistic) is always level, short and slightly higher than tone 1?.

TONE 12 has a downglide preceding a very high tone. Elsewhere it is level and as high as tone 1?.

TONE 2 is always level.

TONE 2? is always level.

TONE 2́ is level and lower than tone 2 prepause. It is level or downglides slightly preceding tone 1 and 2. It is level or upglides slightly preceding tones mid or low.

TONE 2́? is level or downglides slightly and is higher than tone 2.

TONE 3 is always level.

TONE 3́ has a downglide.

TONE 3́? is always level.[9]

TONE 34 has a deeper downglide than tone 3́.

TONE 4 is always level.

TONE 4́ has a downglide.

TONE 4? is always level.

TONE 4́? is level and lower than tone 4.

TONES 42 and 42? have a marked upglide prepause and preceding tones 1 and 2. Elsewhere the glide is small or non-existing. When the 42 glide occurs, the vowel nucleus is often laryngealized.

FOOTNOTES

1. Tlacoatzintepec is a village of about 1,000 inhabitants. It is located on the northern side of the Sierra Madre Occidental in the northern part of the state of Oaxaca, Mexico.

The same language that is spoken in Tlacoatzintepec is also spoken in various small villages around it, as well as in the town of Chiltepec (a migration took place from Tlacoatzintepec to Chiltepec some 50 years ago).

It is estimated that between 2,000 and 3,000 people speak the Chinantec

dialect of Tlacoatzintepec.

The village is made up of three barrios and there are a few minor phonological differences between the speakers of the three barrios.

2.   The Chinantec dialect spoken in and around Tlacoatzintepec borders three other Chinantec dialects and one Mazatec dialect.   Chinantec of San Pedro Sochiapan is spoken to the east; Chinantec of Santa Cruz Tepetotutla is spoken to the south; Chinantec of San Felipe Usila is spoken to the east and Mazatec of Chiquihuitlan is spoken to the north.

3.   Data was collected between May 1978 and May 1979 during fieldwork in Tlacoatzintepec under the auspices of the Summer Institute of Linguistics.

My principal informant was Quintiliano Carrasco Hernández, although a number of speakers provided texts for analyses.

I am indebted to Mabel Lewis for letting me use her initial phonological analysis and to Eunice Pike for her help with the analysis of the phonetic manifestation of the tones.

4.   Some speakers do not have this distinction.

5.   Two words have been found with the cluster /d + y/. Both are suspected of having come in from the outside. /gwɨ³dyu³/ a type of avocado, /hnai³dyo¹/ a type of bean.

6.   Several words with the phoneme /u/ have dialectical differences within the village.   [čᵈű³] or [čóu³] "yesterday"

7.   Some speakers pronounce a nasalized /i/ as /ẽĩ/.

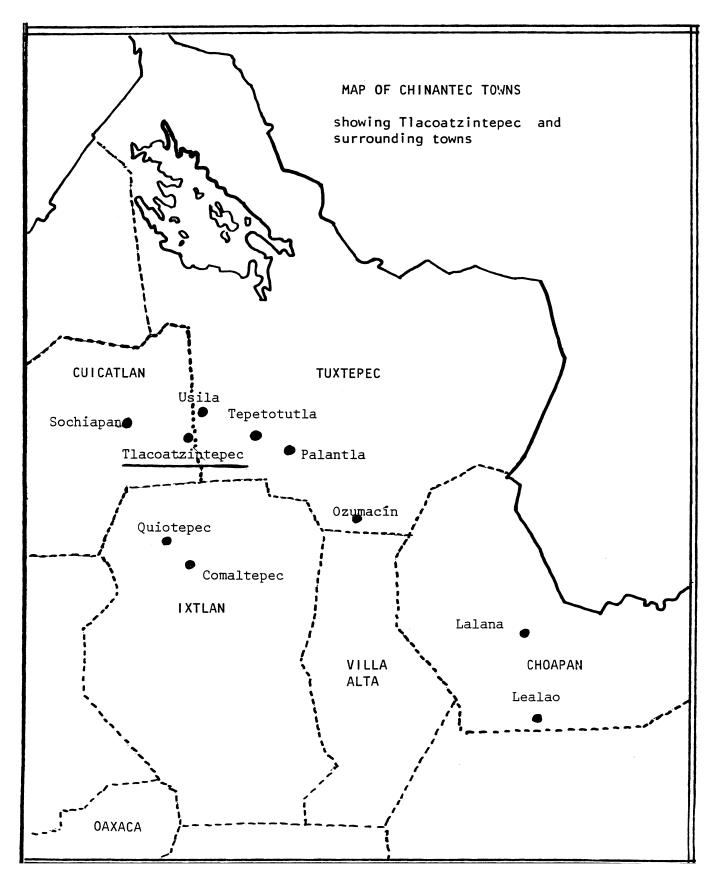8.   Glides are more prominent preceding a nasal.

9.   Tone 3 does not occur in controlled syllables closed by a glottal stop.

REFERENCES

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     Usila Chinantec syllable structure.   IJAL 28.251-55.

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MAP OF CHINANTEC TOWNS

showing Tlacoatzintepec and
surrounding towns

CUICATLAN   TUXTEPEC

Usila
Sochiapan●   ●Tepetotutla

Tlacoatzintepec   ● Palantla

                        Ozumacín

Quiotepec

    ● Comaltepec

IXTLAN

                              Lalana ●
                                          CHOAPAN
                    VILLA
                    ALTA   Lealao ●

OAXACA